



IOWAccess Advisory Council

IOWAccess Revolving Fund Project Application

Request for Funding to complete Execution Phase; no funding required for Scope Analysis or Planning Phases

Part I - Project Information

Date:	December 31, 2008
Agency Name:	Department of Human Rights
Project Name:	Weatherization Assistance Program
Agency Manager:	Jim Newton
Agency Manager Phone Number / E-Mail:	(515) 242-6314 / JIM.NEWTON@iowa.gov
Executive Sponsor (Agency Director or Designee):	Jim Newton
Initial Total for Planning:	\$ N/A
Initial Total for Execution:	\$ N/A
Initial Total for all Phases of Project, if Multi-Phased:	\$34,000 Planning/Execution Phase \$6,500 Hosting
Project Timeline: (estimate start and end dates for project spending)	Project Start Date: Jun 08 Expected Project Completion Date: Mar 09
Revised Total for Planning and Execution:	\$
Revised Total for all Phases of Project, if Multi-Phased:	\$

Part II - Project Overview

A. Project Summary: Describe the nature and use of the proposed project, including what is to be accomplished, how it will be accomplished, and what the costs and benefits will be.

Response:

The Department of Human Rights (DHR) is asking the IOWAccess Advisory Council to fund 25% or \$34,000 for the Weatherization Assistance Program (WAP) software development project plus the first year's hosting costs of \$6,500. With this funding, IOWAccess will help add functionality to enhance the WAP process; provide reporting abilities to improve management of the program by the agencies in the field and the central DHR office; and help offset the risks associated with custom built software development projects. DHR is funding 75% or \$80,000 of the project.

The initiation of this project started in June 2008. Development for the project started in September and the new application is planned to be implemented in March, 2009 before the next program year starts on April 1, 2009.

The mission of the Weatherization Assistance Program (WAP) is to "reduce energy costs for low-income families, particularly for the elderly, people with disabilities, and children, by improving the energy efficiency of their homes while ensuring their health and safety."

DHR's WAP software development project will replace an existing, out-of-date MS Access system with a web based software application and centralized SQL Server database. The new system will improve accessibility to weatherization information, increase the productivity of local organizations throughout the state that provide weatherization assistance, and enhance the overall effectiveness of the program.

The Weatherization Assistance Program (WAP) was created in 1976 to assist low-income families who lacked resources to invest in energy efficiency. The WAP is operated in all 50 states, the District of Columbia, and Native American tribes. Funds are used to improve the energy efficiency of low-income homes using the most advanced technologies and testing protocols available in the housing industry. The energy conservation resulting from the efforts of state and local agencies helps our country reduce its dependence on foreign oil and decrease the cost of energy for families in need while improving the health and safety of their homes.

In the State of Iowa, the Department of Human Rights administers the program and oversees nearly 20 non-profit agencies that provide Weatherization services in the state. The current DHR process, which uses MS Access, requires that files must be modified for and by each agency then emailed back and forth between the agency and DHR. This process is difficult as well as costly to manage and maintain. This process creates multiple versions of the same database; therefore, DHR's copy may not have the most accurate data because it is out of sync with the individual databases at each non-profit organization.

In addition, the files that are emailed back and forth contain confidential data about each applicant seeking weatherization for their home. This project will implement appropriate security to allow each agency to access only the information they are authorized to obtain and help prevent unauthorized parties from obtaining confidential and personal information.

The goal of this project is to provide functionality and features that are comparable with the existing system and improve the process where possible. The technical architecture of the new system eliminates the need to email files with confidential data between agencies throughout the state and DHR.

B. Strategic Plan: How does the proposed project fit into the strategic plan of the requesting agency?

Response:

One of the major programs of DHR is the Weatherization Assistance Program. DHR is looking for ways that the department and the non-profit community organizations can become more efficient and more effective providing service to low income families. There is a potential that federal funding will be increased in the future so more families can benefit from this program. Increased funding will not only provide weatherization to more families but will also employ more people. DHR is preparing for a substantial increase in the size of the WAP program. This new software system is very important to help DHR and each non-profit organization to manage the process for a greater volume of homes to be weatherized each year.

C. Current Technology: Provide a summary of the technology used by the current system. How does the proposed project impact the agency's technological direction? Are programming elements consistent with a Service Oriented Architecture (SOA) approach? Are programming elements consistent with existing enterprise standards?

Response:

The current technology is out-of-date MS Access that must be manually manipulated by DHR with copies emailed to each community organization for additional updates that are emailed back to DHR.

This project will replace MS Access with web based technology and a centralized, secured database for access from the Internet. This technology is a much preferred method of communications, consistent with existing enterprise standards, and greatly enhances the security to protect confidential data about individuals.

In addition, the project uses components of a newer software development approach called Agile Methodology that was formalized by the software industry in 2001. This methodology is being adopted by many organizations as a replacement or modification to the traditional waterfall method. Agile techniques fit very well for projects that replace existing systems like the DOM Property Valuation Submissions (PVS) project funded by IOWAccess in 2007. Agile is an excellent choice for projects where the business processes are well understood and documented. A modified Agile approach is currently being used for a few projects as it is being implemented in ITE where appropriate.

Agile includes a project management process that encourages frequent inspection and adaptation; and encourages team work, self-organization, and accountability. There are many specific agile development methods. Most promote development iterations plus teamwork and collaboration among all team members including customers who are actively engaged on the project team.

Agile chooses to do things in small increments with minimal planning, rather than long-term planning. Iterations are short time frames (known as “timeboxes”) which typically last from one to four weeks. Each iteration is worked on by a team through a full software development cycle, including planning, requirements analysis, design, coding, unit testing, and acceptance testing when a working product is demonstrated to stakeholders. This helps to minimize the overall risk, and allows the project to adapt to changes more quickly.

Documentation is produced as required by stakeholders. An iteration may not add enough functionality to warrant releasing the product to market, but the goal is to have an available release (with minimal bugs) at the end of each iteration. Multiple iterations may be required to release a product or new features.

Since the WAP project is replacing an existing system, the business processes are well understood and the business logic is documented in the current application. Instead of using the waterfall approach of phases that include Initiation, Scope Analysis, Design/Planning, and Execution, the project team (AEGS & DHR) listed all the business functions in priority order and began working on the functions in order -- developing requirements, design, and new functions during each two week timebox. This approach reduced the effort and cost of comprehensive documentation in the form of UML use case diagrams and allowed the project team to collapse the project into one phase delivering inspectable, customer testable functionality the end of each timebox.

One disadvantage of using this approach is that without detailed scope analysis, design and planning phases the project cost estimates are less accurate. Using a Agile approach, the functionality is prioritized so the project sponsor can make a choice when the funding/budget is depleted – 1) accept the application as completed and release the software for use; or 2) seek additional funding to implement the functionality that is not complete.

D. Statutory or Other Requirements

Is this project or expenditure necessary for compliance with a Federal law, rule, or order?

YES (If "Yes", cite the specific Federal law, rule or order, with a short explanation of how this project is impacted by it.)

Response:

N/A

Is this project or expenditure required by state law, rule or order?

YES (If "YES", cite the specific state law, rule or order, with a short explanation of how this project is impacted by it.)

Response:

N/A

Does this project or expenditure meet a health, safety or security requirement?

YES (If "YES", explain.)

Response:

N/A

Is this project or expenditure necessary for compliance with an enterprise technology standard?

YES (If "YES", cite the specific standard.)

Response:

N/A

[This section to be scored by application evaluator.]

Requirements/Compliance Evaluation (15 Points Maximum)

If the answer to these criteria is "no," the point value is zero (0). Depending upon how directly a qualifying project or expenditure may relate to a particular requirement (federal mandate, state mandate, health-safety-security issue, or compliance with an enterprise technology standard), or satisfies more than one requirement (e.g. it is mandated by state and federal law and fulfills a health and safety mandate), 1-15 points awarded.

E. Impact on Iowa's Citizens

1. Project Participants - List the project participants (i.e. single agency, multiple agencies, State government enterprise, citizens, associations, or businesses, other levels of government, etc.) and provide commentary concerning the nature of participant involvement. Be sure to specify who and how many **direct** users the system will impact. Also specify whether the system will be of use to other interested parties: who they may be, how many people are estimated, and how they will use the system.

Response:

Direct users of the system are persons from 18 nonprofit agencies and the Department of Human Rights. Non – direct users of the system who will also benefit include all the low income families that receive weatherization assistance and all the contractors that provide weatherization services. On average, 80,000 lowans apply for weatherization assistance each year. Funding is available to provide weatherization for approximately 2,000 annually.

2. Service Improvements - Summarize the extent to which the project or expenditure improves service to Iowa citizens or within State government. Included would be such items as improving the quality of life, reducing the government hassle factor, providing enhanced services, improving work processes, etc.

Response:

Nationally, low income families save an average of \$413 in reduced first-year energy costs, at current prices. Weatherization measures reduce national energy demand by the equivalent of

18 million barrels of oil per year. Weatherization saves an average of 32% in gas space heating. Reducing energy demand decreases the environmental impacts of energy production.

In addition, Weatherization creates non-energy benefits, including increased property value, reduced incidence of fire, reduced utility arrearages and bad debt, federal taxes generated from employment, income generated from indirect employment, avoided costs of unemployment benefits, and reduced pollution. Benefits that are more difficult to quantify include improved health and safety conditions, increased comfort for occupants, a reduction in homelessness and mobility, and extended lifetime of affordable housing.

This project will enable to DHR and Agencies throughout the state improve the flow of information and communication. DHR and these community organizations will be able to provide better services for low income families who receive weatherization and the network of local Weatherization providers. The list of eligible clients will be available sooner so homes can be weatherized sooner than with the existing process.

3. Citizen Impact – Summarize how the project leads to a more informed citizenry, facilitates accountability, and encourages participatory democracy. If this is an extension of another project, what has been the adoption rate of Iowa's citizens or government employees with the preceding project?

Response:

The Weatherization Assistance Program (WAP) is a federal grant program established to help reduce the heating and cooling costs for low income persons, particularly the elderly, disabled, and children, by improving the energy efficiency of their homes.

Besides the obvious benefit of conserving energy, the Iowa WAP also provides other benefits to Iowa and its residents. The program results in millions of dollars of additional value added to the Iowa economy.

The WAP has developed from a program that stressed low cost, temporary measures installed by volunteers, to a program that uses trained crews and contractors to install permanent cost effective measures that address both the building shell and the heating and cooling systems in the dwelling.

This project will modernize the software application used to manage the communications, information flow, and data needed to select 2,000 weatherization clients from 80,000 applications, inform the agencies who is eligibly and manage the process for providing weatherization services.

4. Public Health and/or Safety – Explain requirements or impact on the health and safety of the public.

Response:

The Iowa Weatherization program mitigates certain health and safety problems in the client's homes, maintains affordable housing for low-income persons, reduces utility averages, and reduces environmental pollution.

[This section to be scored by application evaluator.]

Impact Evaluation (15 Points Maximum)

- Minimally directly impacts Iowa citizens (0-5 points).
- Moderately directly impacts Iowa citizens (6-10 points).
- Significantly directly impacts Iowa citizens (11-15 points).

[This section to be scored by application evaluator.]

Customer Service Evaluation (10 Points Maximum)

- Minimally improves customer service (0-3 points).
- Moderately improves customer service (4-6 points).
- Significantly improves customer service (7-10 points).

F. Scope

Is this project the first part of a future, larger project?

- YES (If "YES", explain.) NO, it is a stand-alone project

Response: It is a stand-alone project

Is this project a continuation of a previously begun project?

- YES (If "YES", explain.)

Response: No

[This section to be scored by application evaluator.]

Scope Evaluation (10 Points Maximum)

- This is the first year of a multi-year project / expenditure or project / expenditure duration is one year (0-5 points)
- The project / expenditure is of a multi-year nature and each annual component produces a definable and stand-alone outcome, result or product (2-8 points).
- This is beyond the first year of a multi-year project / expenditure (6-10 points)

The last part of this criteria involves rating the extent to which a project or expenditure is at an advanced stage of Execution and termination of the project / expenditure would waste previously invested resources.

G. Source of Funds

On a fiscal year basis, how much of the total project cost (\$ amount and %) would be absorbed by your agency from non-Pooled Technology/IOWAccess funds? If desired, provide additional comment / response below.

Response:

DHR is asking IOWAccess to fund 25% or \$34,000 of the project plus the first year's hosting costs of \$6,500. DHR is funding 75% or \$80,000 of the project.

[This section to be scored by application evaluator.]

Funds Evaluation (5 Points Maximum)

- 0% (0 points)
- 1%-12% (1 point)
- 13%-25% (2 points)
- 25%-38% (3 points)
- 39%-50% (4 points)
- Over 50% (5 points)



Part III – Planning & Execution Proposal

Amount of Funding Requested: \$34,000

Amount of Hosting Requested: \$6,400

A. Process Reengineering

Provide a *pre-project or pre-expenditure* (before Execution) description of the impacted system or process. Be sure to include the procedures used to administer the impacted system or process and how citizens interact with the current system.

Response:

The current process requires that data from the Low-Income Home Energy Assistance Program (LIHEAP) is uploaded into an MS Access database to determine who from this group is eligible for weatherization and to communicate this information to 18 local community action agencies. The LIHEAP data contains personal information for about 80,000 lowans. This information includes social security number, names, addresses, and energy usage.

This information is reviewed and divided into 18 groups that match the 18 agencies. Then 18 duplicate MS Access database files are emailed to each of the 18 agencies with the specific information for lowans that live in the agencies' respective areas. Each of the 18 database copies is modified and updated by each agency and emailed back to DHR.

Email is simply not a secure way to send confidential data. Emails are discoverable and readable. Emails can be lost, accidentally deleted, and easily forwarded. Data inside an email is difficult to protect once the email leaves the State's network.

Manually processing the data, preparing 18 different databases with only authorized data, updating the database by each agency, and emailing these database files back and forth requires 1100 hours by personnel in DHR and the 18 agencies each year.

Provide a *post-project or post-expenditure* (after Execution) description of the impacted system or process. Be sure to include the procedures used to administer the impacted system or process and how citizens will interact with the proposed system. In particular, note if the project or expenditure makes use of information technology in reengineering traditional government processes.

Response:

Once the new system is implemented, the data will be uploaded into a centralized and secure SQL Server database protected inside the state network that requires access by using Enterprise Authentication and Authorization (ENT A&A) service through the new application. Direct access to the database will not be allowed.

DHR and the 18 local agencies will only be able to access the data by using their A&A credentials in a Web Browser with SSL security and encryption. In addition, the SSN will not be viewable by any user. The SSN is part of the information from LIHEAP and will be included in the new SQL database to keep track of individuals by the system but only the system and

selected trusted system administrators in ITE will have access. No user of the system can view or retrieve any SSN.

[This section to be scored by application evaluator.]

Reengineering Evaluation (10 Points Maximum)

- Minimal use of information technology to reengineer government processes (0-3 points).
- Moderate use of information technology to reengineer government processes (4-6 points).
- Significant use of information technology to reengineer government processes (7-10).

B. Timeline

Provide a projected timeline for the Planning phase of the project. Include such items as **start date**, **projected end date**, planning, and database Planning. Also include the parties responsible for each item.

The initiation of the project started in June 2008. Development started in September and the new application is planned to be implemented in March, 2009 before the next program year starts on April 1, 2009.

[This section to be scored by application evaluator.]

Planning Timeline Evaluation (10 Points Maximum)

- The timeline contains several problem areas (0-3 points).
- The timeline seems reasonable with few problem areas (4-6 points).
- The timeline seems reasonable with no problem areas (7-10).

C. Spending plan

Explain how the funds will be allocated.

DHR is asking the IOWAccess Advisory Council to fund 25% or \$34,000 of the project plus the first year's hosting costs of \$6,500. With this funding, the IOWAccess will help add functionality to enhance the process; provide reporting abilities to improve management of the program by the agencies in the field and the central DHR office; and help offset the risks associated with custom built software development projects. DHR is funding 75% or \$80,000 of the project.

D. Tangible and/or Intangible Benefits

Respond to the following and transfer data to the Planning Financial Benefit Worksheet, # 5 below and the Execution Financial Benefit Worksheet, # IV E3, as necessary:

1. One Year Pre-Project Cost - This section should be completed only if state government operations costs are expected to be reduced as a result of project Execution. **Quantify actual state government direct and indirect costs** (personnel, support, equipment, etc.) associated with the activity, system or process prior to project Execution.

Describe One Year Pre-Project Cost:

Quantify One Year Pre-Project Cost:

	State Total
FTE Cost(salary plus benefits):	\$
Support Cost (i.e. office supplies, telephone, pagers, travel, etc.):	\$
Other Cost (expense items other than FTEs & support costs, i.e. indirect costs if applicable, etc.):	\$
Total One Year Pre-Project Cost:	\$

2. One Year Post-Project Cost - This section should be completed only if state government operations costs are expected to be reduced as a result of project Execution. **Quantify actual state government direct and indirect costs** (personnel, support, equipment, etc.) associated with the activity, system or process after project Execution.

Describe One Year Post-Project Cost:

Quantify One Year Post-Project Cost:

	State Total
FTE Cost(salary plus benefits):	\$
Support Cost (i.e. office supplies, telephone, pagers, travel, etc.):	\$
Other Cost (expense items other than FTEs & support costs, i.e. indirect costs if applicable, etc.):	\$
Total One Year Post-Project Cost:	\$

3. One Year Citizen Benefit - Quantify the estimated one year value of the project to Iowa citizens. This includes the "hard cost" value of avoiding expenses ("hidden taxes") related to conducting business with State government. These expenses may be of a personal or business nature. They could be related to transportation, the time expended on the manual processing of governmental paperwork such as

licenses or applications, taking time off work, mailing, or other similar expenses. As a "rule of thumb," use a value of \$10 per hour for citizen time.

Describe savings justification:

<u>Transaction Savings</u>	
Number of annual online transactions:	
Hours saved/transaction:	
Number of Citizens affected:	
Value of Citizen Hour	\$
Total Transaction Savings:	\$
Other Savings (Describe)	\$
Total One Year Citizen Benefit :	\$

4. Opportunity Value/Risk or Loss Avoidance - Quantify the estimated one year non-operations benefit to State government. This could include such items as qualifying for additional matching funds, avoiding the loss of matching funds, avoiding program penalties/sanctions or interest charges, avoiding risks to health/security/safety, avoiding the consequences of not complying with State or Federal laws, providing enhanced services, avoiding the consequences of not complying with enterprise technology standards, etc

Response:

Manually processing the data, preparing 18 different databases with only authorized data, updating the database by each agency, and emailing these database files back and forth requires 1100 hours by personnel in DHR and the 18 agencies each year.

5. Planning Phase Cost Calculation

On a fiscal year basis, enter the **estimated** cost by funding source: Be sure to include developmental costs and ongoing costs, such as those for hosting the site, maintenance, upgrades, etc., during the **Planning Phase**.

	Current FY		Current FY +1		Current FY +2	
	Cost(\$)	% Total Cost	Cost(\$)	% Total Cost	Cost(\$)	% Total Cost
State General Fund	\$0	0%	\$0	0%	\$0	0%
Pooled Tech. Fund /IOWAccess Fund	\$40,500	0%	\$0	0%	\$0	0%
Federal Funds	\$0	0%	\$0	0%	\$0	0%
Local Gov. Funds	\$0	0%	\$0	0%	\$0	0%
Grant or Private Funds	\$0	0%	\$0	0%	\$0	0%
Other Funds (Specify)	\$80,000	0%	\$0	0%	\$0	0%
Total Project Cost	\$120,500	0%	\$0	0%	\$0	0%
Non-Pooled Tech./Non-IOWAccess Total	\$80,000	0%	\$0	0%	\$0	0%

6. Planning Financial Benefit Worksheet

A. Total Six Year (Useful Life) Pre-Project cost	\$ 235,200	
B. Total Six Year (Useful Life) Post-Project cost	\$	
C. State Government Benefit for 6 year useful life		\$ 84,000
D. Citizen Benefit for 6 year useful life		\$151,200
E. Opportunity Value or Risk/Loss Avoidance Benefit		\$
F. Total Project Benefit	\$235,200	
G. Project Cost Calculation	\$120,500	
Benefit / Cost Ratio: (F/G) =	1.95	
Return On Investment (ROI): ((F-G) / Requested Project Funds) * 100	337%	

6. Benefits Not Readily Quantifiable - List and summarize the overall non-quantifiable benefits (i.e., IT innovation, unique system application, utilization of new technology, hidden taxes, improving the quality of life, reducing the government hassle factor, meeting a strategic goal, etc.).

Response:

Non – Quantifiable Benefits include:

- The new list of eligible clients is available earlier so homes can be weatherized earlier than in the past with the existing process.
- The new system will keep data confidential by eliminating emails with personal identifiable data and significantly restricting access to Social Security Numbers.
- Local agencies can to access their data anytime on a 24 X 7 basis.

[This section to be scored by application evaluator.]

Planning Financial Evaluation (15 Points Maximum)

- The financial analysis contains several questionable entries and provides minimal financial benefit to citizens (0-5 points).
- The financial analysis seems reasonable with few questionable entries and provides a moderate financial benefit to citizens (6-10 points).
- The financial analysis seems reasonable with no problem areas and provides maximum financial benefit to citizens (11-15).



Evaluation Summary

[This section to be completed by application evaluator.]

Planning & Execution Phase:

Requirements/Compliance Evaluation (15 Points Maximum)	<input type="checkbox"/>
Impact Evaluation (15 Points Maximum)	<input type="checkbox"/>
Customer Service Evaluation (10 Points Maximum)	<input type="checkbox"/>
Scope Evaluation (10 Points Maximum)	<input type="checkbox"/>
Funds Evaluation (5 Points Maximum)	<input type="checkbox"/>
Reengineering Evaluation (10 Points Maximum)	<input type="checkbox"/>
Planning/Execution Timeline Evaluation (10 Points Maximum)	<input type="checkbox"/>
Planning/Execution Financial Evaluation (15 Points Maximum)	<input type="checkbox"/>
<u>TOTAL PLANNING/EXECUTION EVALUATION</u> (90 Points Maximum)	<input type="checkbox"/>

Execution Timeline Evaluation (10Points Maximum)	<input type="checkbox"/>
Execution Financial Evaluation (15 Points Maximum)	<input type="checkbox"/>
Execution Funding Evaluation (10 Points Maximum)	<input type="checkbox"/>
<u>TOTAL EXECUTION EVALUATION</u> (35 Points Maximum)	<input type="checkbox"/>

Part V – Auditable Outcome Measures

For each of the following categories, list the auditable metrics for success after Execution and identify how they will be measured.

1. Improved customer service

Response:

2. Citizen impact

Response:

3. Cost Savings

Response:

4. Project reengineering

Response:

5. Source of funds (Budget %)

Response:

6. Tangible/Intangible benefits

Response: